Journal of Nuclear Materials 167 (1989) 283–284
North-Holland, Amsterdam

AUTHOR INDEX

Adamson, M.G., see Kassner 167 (1989) 160
Adler, P.H., see Kassner 167 (1989) 160
Agarwal, R., see Prasad 167 (1989) 261
Alcock, C.B., Thermodynamic data for uranium and thorium intermetallic compounds: a historical perspective 167 (1989) 7
Anthonysamy, S., see Rajendran Pillai 167 (1989) 105
Azad, A.M., O.M. Sreedharan and J.B. Gnanamoorthy, Activities of metals in an AISI 316LN stainless steel by emf measurements 167 (1989) 82
Azad, A.M. and O.M. Sreedharan, Chromium activity in the Cr–Te system using a CaF_2 emf method 167 (1989) 89

Babelot, J.-F. and M. Hoch, The constant vaporizing composition of UO_2 at 2150 and 2800 K 167 (1989) 25
Babu, R., see Saha 167 (1989) 271
Balasubramanian, R., see Viswanathan 167 (1989) 94
Ball, R.G.J., W.G. Burns, J. Henshaw, M.A. Mignanelli and P.E. Potter, The chemical constitution of the fuel–clad gap in oxide fuel pins for nuclear reactors 167 (1989) 191
Blomquist, R.A., see Leibowitz 167 (1989) 76
Boersma-Klein, W., J. Kistemaker and H.N. Stein, Use of thermochemical modelling for the analysis of energy extraction in a gas-core fission reactor 167 (1989) 135
Bose, D.K., see Tangri 167 (1989) 127
Brewer, L., History of the application of the generalized Lewis acid–base theory to metals 167 (1989) 3
Burns, W.G., see Ball 167 (1989) 191

Cordfunke, E.H.P., R.J.M. Konings and E.F. Westrum, Jr., Recent thermochemical research on reactor materials and fission products 167 (1989) 205
Cordfunke, E.H.P., see Konings 167 (1989) 251
Cubicciotti, D., Equilibrium chemistry of nitrogen and potential–pH diagrams for the Fe–Cr–H_2O system in BWR water 167 (1989) 241
Czechowicz, D.G., see Storms 167 (1989) 169

Darwin Albert Raj, D., see Viswanathan 167 (1989) 94

Fujino, T., see Nakamura 167 (1989) 36

Gnanamoorthy, J.B., see Azad 167 (1989) 82
Götzmann, O., Thermodynamics of ceramic breeder materials for fusion reactors 167 (1989) 213

Henshaw, J., see Ball 167 (1989) 191
Hoch, M., see Babelot 167 (1989) 25

Iyer, V.S., see Prasad 167 (1989) 261

Kassner, M.E., P.H. Adler, M.G. Adamson and D.E. Peterson, Evaluation and thermodynamic analysis of phase equilibria in the U–Al system 167 (1989) 160
Kistemaker, J., see Boersma-Klein 167 (1989) 135
Kleinschmidt, P.D., Sublimation studies of plutonium trifluoride 167 (1989) 131
Kleykamp, H., Constitution and thermodynamics of the Mo–Ru, Mo–Pd, Ru–Pd and Mo–Ru–Pd systems 167 (1989) 49
Konings, R.J.M., see Cordfunke 167 (1989) 205
Konings, R.J.M. and E.H.P. Cordfunke, Thermochemical properties of the alkali hydroxides: a review 167 (1989) 251
Koyama, T., see Yamawaki 167 (1989) 113
Koyama, T. and M. Yamawaki, High-temperature vaporization of thorium–uranium mixed monocarbide $(Th_{1-y}, U_y)C$ 167 (1989) 122
Krikorian, O.H. and D.Y. Lai, Modeling of heat capacities of metals 167 (1989) 14
Krishnamurthy, D., see Sridharan 167 (1989) 265

Lai, D.Y., see Krikorian 167 (1989) 14
Lee, M.C.Y., Acitivity measurement and its use in predicting phase relationships in stainless steels 167 (1989) 175
Leibowitz, L., R.A. Blomquist and A.D. Pelton, Thermodynamics of the uranium–zirconium system 167 (1989) 76
Lundberg, L.B., High-temperature interdiffusion and phase equilibria in U–Mo 167 (1989) 64

Madan, B.S., C. Mallika, O.M. Sreedharan, P. Rodriguez and S.R. Paranjpe, Oxygen potentials in two-phase mixtures of the system MgU_2O_x $(5 < x \leqslant 7)$ 167 (1989) 278
Mallika, C. and O.M. Sreedharan, Tellurium activities in the Pd–Te system by emf measurements 167 (1989) 181

Mallika, C., see Madan 167 (1989) 278
Mathews, C.K., see Viswanathan 167 (1989) 94
Mathews, C.K., see Rajendran Pillai 167 (1989) 105
Mathews, C.K., see Sridharan 167 (1989) 265
Mathews, C.K., see Saha 167 (1989) 271
Matsui, T., T. Natsume and K. Naito, Heat capacity measurements of $U_{0.80}Zr_{0.20}$ and $U_{0.80}Mo_{0.20}$ alloys from room temperature to 1300 K 167 (1989) 152
Mignanelli, M.A., see Ball 167 (1989) 191
Miyake, M., see Yamanaka 167 (1989) 231

Nagarajan, K., see Saha 167 (1989) 271
Naito, K., High-temperature heat capacities of UO_2 and doped UO_2 167 (1989) 30
Naito, K., see Matsui 167 (1989) 152
Nakamura, A. and T. Fujino, Thermodynamic model of UO_{2+x} 167 (1989) 36
Natsume, T., see Matsui 167 (1989) 152

Ohsato, T., see Takahashi 167 (1989) 147

Paranjpe, S.R., see Madan 167 (1989) 278
Pelton, A.D., see Leibowitz 167 (1989) 76
Peterson, D.E., see Kassner 167 (1989) 160
Potter, P.E., see Ball 167 (1989) 191
Prakashan, P.K., see Rajendran Pillai 167 (1989) 105
Prasad, R., R. Agarwal, K.N. Roy, V.S. Iyer, V. Venugopal and D.D. Sood, Determination of thermal properties of $Cs_2Cr_2O_7$(s, *l*) by high temperature Calvet calorimetry 167 (1989) 261

Rajendran Pillai, S., S. Anthonysamy, P.K. Prakashan, R. Ranganathan, P.R. Vasudeva Rao and C.K. Mathews, Carburization of stainless steel clad by uranium–plutonium carbide fuel 167 (1989) 105
Ranganathan, R., see Rajendran Pillai 167 (1989) 105
Rodriguez, P., see Madan 167 (1989) 278
Roy, K.N., see Prasad 167 (1989) 261

Saha, B., see Viswanathan 167 (1989) 94
Saha, R., R. Babu, K. Nagarajan and C.K. Mathews, Thermodynamic properties of ternary oxides of fission products from calorimetric measurements 167 (1989) 271
Sai Baba, M., see Viswanathan 167 (1989) 94
Schauer, V. and G. Schumacher, Study of adsorption and desorption of water on Li_4SiO_4 167 (1989) 225
Schumacher, G., see Schauer 167 (1989) 225
Shimada, H., see Takahashi 167 (1989) 147
Sood, D.D., see Prasad 167 (1989) 261
Sreedharan, O.M., see Azad 167 (1989) 82
Sreedharan, O.M., see Azad 167 (1989) 89
Sreedharan, O.M., see Mallika 167 (1989) 181
Sreedharan, O.M., see Madan 167 (1989) 278
Sridharan, R., D. Krishnamurthy and C.K. Mathews, Thermodynamic properties of ternary oxides of alkali metals from oxygen potential measurements 167 (1989) 265
Stein, H.N., see Boersma-Klein 167 (1989) 135
Storms, E.K. and D.G. Czechowicz, The Gibbs energy of formation for URe_2 obtained from the interaction between UN and Re 167 (1989) 169
Sundaresan, M., see Tangri 167 (1989) 127

Takahashi, Y., see Yamawaki 167 (1989) 113
Takahashi, Y., K. Yamamoto, T. Ohsato, H. Shimada, T. Terai and M. Yamawaki, Heat capacities of uranium–zirconium alloys from 300 to 1100 K 167 (1989) 147
Tanaka, T., see Yamanaka 167 (1989) 231
Tangri, R.P., V. Venugopal, D.K. Bose and M. Sundaresan, Thermodynamics of vaporisation of caesium molybdate 167 (1989) 127
Terai, T., see Takahashi 167 (1989) 147

Vasudeva Rao, P.R., see Rajendran Pillai 167 (1989) 105
Venugopal, V., see Tangri 167 (1989) 127
Venugopal, V., see Prasad 167 (1989) 261
Viswanathan, R., M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews, Thermochemistry of metal-rich chromium telluride and its role in fuel–clad chemical interactions 167 (1989) 94

Westrum, Jr., E.F., see Cordfunke 167 (1989) 205

Yamamoto, K., see Takahashi 167 (1989) 147
Yamanaka, S., T. Tanaka and M. Miyake, Effect of oxygen of hydrogen solubility in zirconium 167 (1989) 231
Yamawaki, M., T. Koyama and Y. Takahashi, Thermodynamics of the vaporization of non-stoichiometric thorium monocarbide $ThC_{1\pm x}$ 167 (1989) 113
Yamawaki, M., see Koyama 167 (1989) 122
Yamawaki, M., see Takahashi 167 (1989) 147

Journal of Nuclear Materials 167 (1989) 285–290
North-Holland, Amsterdam

SUBJECT INDEX

Actinides *(excl. Th, U, Pu)*
Thermodynamics of the vaporization of non-stoichiometric thorium monocarbide $ThC_{1\pm x}$, M. Yamawaki, T. Koyama and Y. Takahashi 167 (1989) 113
High-temperature vaporization of thorium–uranium mixed monocarbide $(Th_{1-y}, U_y)C$, T. Koyama and M. Yamawaki 167 (1989) 122

Alloys *("Various" i.e. not listed elsewhere by name)*
History of the application of the generalized Lewis acid–base theory to metals, L. Brewer 167 (1989) 3
Constitution and thermodynamics of the Mo–Ru, Mo–Pd, Ru–Pd and Mo–Ru–Pd systems, H. Kleykamp 167 (1989) 49
Acitivity measurement and its use in predicting phase relationships in stainless steels, M.C.Y. Lee 167 (1989) 175

Aluminium, Aluminium Alloys and Compounds
Thermodynamic data for uranium and thorium intermetallic compounds: a historical perspective, C.B. Alcock 167 (1989) 7
Evaluation and thermodynamic analysis of phase equilibria in the U–Al system, M.E. Kassner, P.H. Adler, M.G. Adamson and D.E. Peterson 167 (1989) 160
Acitivity measurement and its use in predicting phase relationships in stainless steels, M.C.Y. Lee 167 (1989) 175

Ceramics *("Various" i.e. not listed elsewhere by name)*
Thermodynamics of ceramic breeder materials for fusion reactors, O. Götzmann 167 (1989) 213

Cladding Materials
Activities of metals in an AISI 316LN stainless steel by emf measurements, A.M. Azad, O.M. Sreedharan and J.B. Gnanamoorthy 167 (1989) 82
Carburization of stainless steel clad by uranium–plutonium carbide fuel, S. Rajendran Pillai, S. Anthonysamy, P.K. Prakashan, R. Ranganathan, P.R. Vasudeva Rao and C.K. Mathews 167 (1989) 105
The Gibbs energy of formation for URe_2 obtained from the interaction between UN and Re, E.K. Storms and D.G. Czechowicz 167 (1989) 169

Compatibility and Corrosion
Chromium activity in the Cr–Te system using a CaF_2 emf method, A.M. Azad and O.M. Sreedharan 167 (1989) 89
Thermochemistry of metal-rich chromium telluride and its role in fuel–clad chemical interactions, R. Viswanathan, M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews 167 (1989) 94
Carburization of stainless steel clad by uranium–plutonium carbide fuel, S. Rajendran Pillai, S. Anthonysamy, P.K. Prakashan, R. Ranganathan, P.R. Vasudeva Rao and C.K. Mathews 167 (1989) 105
The Gibbs energy of formation for URe_2 obtained from the interaction between UN and Re, E.K. Storms and D.G. Czechowicz 167 (1989) 169
The chemical constitution of the fuel–clad gap in oxide fuel pins for nuclear reactors, R.G.J. Ball, W.G. Burns, J. Henshaw, M.A. Mignanelli and P.E. Potter 167 (1989) 191
Thermodynamics of ceramic breeder materials for fusion reactors, O. Götzmann 167 (1989) 213
Equilibrium chemistry of nitrogen and potential–pH diagrams for the Fe–Cr–H_2O system in BWR water, D. Cubicciotti 167 (1989) 241
Thermodynamic properties of ternary oxides of alkali metals from oxygen potential measurements, R. Sridharan, D. Krishnamurthy and C.K. Mathews 167 (1989) 265

Computer Calculations, including Modelling
Modeling of heat capacities of metals, O.H. Krikorian and D.Y. Lai 167 (1989) 14
The constant vaporizing composition of UO_2 at 2150 and 2800 K, J.-F. Babelot and M. Hoch 167 (1989) 25
Thermodynamic model of UO_{2+x}, A. Nakamura and T. Fujino 167 (1989) 36
Thermodynamics of the uranium–zirconium system, L. Leibowitz, R.A. Blomquist and A.D. Pelton 167 (1989) 76

Use of thermochemical modelling for the analysis of energy extraction in a gas-core fission reactor, W. Boersma-Klein, J. Kistemaker and H.N. Stein 167 (1989) 135
Evaluation and thermodynamic analysis of phase equilibria in the U–Al system, M.E. Kassner, P.H. Adler, M.G. Adamson and D.E. Peterson 167 (1989) 160
Recent thermochemical research on reactor materials and fission products, E.H.P. Cordfunke, R.J.M. Konings and E.F. Westrum, Jr. 167 (1989) 205
Equilibrium chemistry of nitrogen and potential–pH diagrams for the Fe–Cr–H_2O system in BWR water, D. Cubicciotti 167 (1989) 241

Constitution
Constitution and thermodynamics of the Mo–Ru, Mo–Pd, Ru–Pd and Mo–Ru–Pd systems, H. Kleykamp 167 (1989) 49
Thermodynamics of the uranium–zirconium system, L. Leibowitz, R.A. Blomquist and A.D. Pelton 167 (1989) 76
Evaluation and thermodynamic analysis of phase equilibria in the U–Al system, M.E. Kassner, P.H. Adler, M.G. Adamson and D.E. Peterson 167 (1989) 160

Diffusion *(incl. Thermodiffusion)*
High-temperature interdiffusion and phase equilibria in U–Mo, L.B. Lundberg 167 (1989) 64

Fission Products
Constitution and thermodynamics of the Mo–Ru, Mo–Pd, Ru–Pd and Mo–Ru–Pd systems, H. Kleykamp 167 (1989) 49
Chromium activity in the Cr–Te system using a CaF_2 emf method, A.M. Azad and O.M. Sreedharan 167 (1989) 89
Thermochemistry of metal-rich chromium telluride and its role in fuel–clad chemical interactions, R. Viswanathan, M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews 167 (1989) 94
Thermodynamics of vaporisation of caesium molybdate, R.P. Tangri, V. Venugopal, D.K. Bose and M. Sundaresan 167 (1989) 127
Tellurium activities in the Pd–Te system by emf measurements, C. Mallika and O.M. Sreedharan 167 (1989) 181
The chemical constitution of the fuel–clad gap in oxide fuel pins for nuclear reactors, R.G.J. Ball, W.G. Burns, J. Henshaw, M.A. Mignanelli and P.E. Potter 167 (1989) 191
Recent thermochemical research on reactor materials and fission products, E.H.P. Cordfunke, R.J.M. Konings and E.F. Westrum, Jr. 167 (1989) 205
Thermochemical properties of the alkali hydroxides: a review, R.J.M. Konings and E.H.P. Cordfunke 167 (1989) 251
Determination of thermal properties of $Cs_2Cr_2O_7$(s, *l*) by high temperature Calvet calorimetry, R. Prasad, R. Agarwal, K.N. Roy, V.S. Iyer, V. Venugopal and D.D. Sood 167 (1989) 261
Thermodynamic properties of ternary oxides of fission products from calorimetric measurements, R. Saha, R. Babu, K. Nagarajan and C.K. Mathews 167 (1989) 271

Fuel Cycles
Recent thermochemical research on reactor materials and fission products, E.H.P. Cordfunke, R.J.M. Konings and E.F. Westrum, Jr. 167 (1989) 205

Fuel Reprocessing
Recent thermochemical research on reactor materials and fission products, E.H.P. Cordfunke, R.J.M. Konings and E.F. Westrum, Jr. 167 (1989) 205

Fuels and Fuel Elements: Fast Reactors
Thermodynamics of the uranium–zirconium system, L. Leibowitz, R.A. Blomquist and A.D. Pelton 167 (1989) 76
Chromium activity in the Cr–Te system using a CaF_2 emf method, A.M. Azad and O.M. Sreedharan 167 (1989) 89
Thermochemistry of metal-rich chromium telluride and its role in fuel–clad chemical interactions, R. Viswanathan, M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews 167 (1989) 94
Carburization of stainless steel clad by uranium–plutonium carbide fuel, S. Rajendran Pillai, S. Anthonysamy, P.K. Prakashan, R. Ranganathan, P.R. Vasudeva Rao and C.K. Mathews 167 (1989) 105
Thermodynamics of the vaporization of non-stoichiometric thorium monocarbide $ThC_{1\pm x}$, M. Yamawaki, T. Koyama and Y. Takahashi 167 (1989) 113
High-temperature vaporization of thorium–uranium mixed monocarbide $(Th_{1-y}, U_y)C$, T. Koyama and M. Yamawaki 167 (1989) 122
Heat capacity measurements of $U_{0.80}Zr_{0.20}$ and $U_{0.80}Mo_{0.20}$ alloys from room temperature to 1300 K, T. Matsui, T. Natsume and K. Naito 167 (1989) 152
The chemical constitution of the fuel–clad gap in oxide fuel pins for nuclear reactors, R.G.J. Ball, W.G. Burns, J. Henshaw, M.A. Mignanelli and P.E. Potter 167 (1989) 191

Recent thermochemical research on reactor materials and fission products, E.H.P. Cordfunke, R.J.M. Konings and E.F. Westrum, Jr. 167 (1989) 205
Thermodynamic properties of ternary oxides of alkali metals from oxygen potential measurements, R. Sridharan, D. Krishnamurthy and C.K. Mathews 167 (1989) 265
Thermodynamic properties of ternary oxides of fission products from calorimetric measurements, R. Saha, R. Babu, K. Nagarajan and C.K. Mathews 167 (1989) 271

Fuels and Fuel Elements: High-Temperature Reactors
The Gibbs energy of formation for URe_2 obtained from the interaction between UN and Re, E.K. Storms and D.G. Czechowicz 167 (1989) 169

Fuel and Fuel Elements: Thermal Reactors
Thermodynamics of the vaporization of non-stoichiometric thorium monocarbide $ThC_{1\pm x}$, M. Yamawaki, T. Koyama and Y. Takahashi 167 (1989) 113
High-temperature vaporization of thorium–uranium mixed monocarbide $(Th_{1-y}, U_y)C$, T. Koyama and M. Yamawaki 167 (1989) 122
The chemical constitution of the fuel–clad gap in oxide fuel pins for nuclear reactors, R.G.J. Ball, W.G. Burns, J. Henshaw, M.A. Mignanelli and P.E. Potter 167 (1989) 191
Oxygen potentials in two-phase mixtures of the system MgU_2O_x $(5 < x \leqslant 7)$, B.S. Madan, C. Mallika, O.M. Sreedharan, P. Rodriguez and S.R. Paranjpe 167 (1989) 278

Fusion Reactors: Blanket Materials *(incl. Lithium)*
Thermodynamics of ceramic breeder materials for fusion reactors, O. Götzmann 167 (1989) 213
Study of adsorption and desorption of water on Li_4SiO_4, V. Schauer and G. Schumacher 167 (1989) 225

Fusion Reactors: Surface Effects
Study of adsorption and desorption of water on Li_4SiO_4, V. Schauer and G. Schumacher 167 (1989) 225

Gases *(excl. Tritium)* **in Metals, Alloys and Ceramics**
Effect of oxygen of hydrogen solubility in zirconium, S. Yamanaka, T. Tanaka and M. Miyake 167 (1989) 231

Graphite and Carbon
Use of thermochemical modelling for the analysis of energy extraction in a gas-core fission reactor, W. Boersma-Klein, J. Kistemaker and H.N. Stein 167 (1989) 135

Hydrogen and Hydrides
Study of adsorption and desorption of water on Li_4SiO_4, V. Schauer and G. Schumacher 167 (1989) 225
Effect of oxygen of hydrogen solubility in zirconium, S. Yamanaka, T. Tanaka and M. Miyake 167 (1989) 231

History and Nuclear Materials
History of the application of the generalized Lewis acid–base theory to metals, L. Brewer 167 (1989) 3
Thermodynamic data for uranium and thorium intermetallic compounds: a historical perspective, C.B. Alcock 167 (1989) 7
Use of thermochemical modelling for the analysis of energy extraction in a gas-core fission reactor, W. Boersma-Klein, J. Kistemaker and H.N. Stein 167 (1989) 135

Iron and Iron Alloys *(see Steels)*
Activities of metals in an AISI 316LN stainless steel by emf measurements, A.M. Azad, O.M. Sreedharan and J.B. Gnanamoorthy 167 (1989) 82
Acitivity measurement and its use in predicting phase relationships in stainless steels, M.C.Y. Lee 167 (1989) 175

Irradiation Effects *(excl. Swelling and Voids)*
The chemical constitution of the fuel–clad gap in oxide fuel pins for nuclear reactors, R.G.J. Ball, W.G. Burns, J. Henshaw, M.A. Mignanelli and P.E. Potter 167 (1989) 191

Liquid Metals
Thermodynamic properties of ternary oxides of alkali metals from oxygen potential measurements, R. Sridharan, D. Krishnamurthy and C.K. Mathews 167 (1989) 265

Nuclear Fuels and Elements *(general)*
The constant vaporizing composition of UO_2 at 2150 and 2800 K, J.-F. Babelot and M. Hoch 167 (1989) 25
Thermodynamics of the vaporization of non-stoichiometric thorium monocarbide $ThC_{1\pm x}$, M. Yamawaki, T. Koyama and Y. Takahashi 167 (1989) 113
High-temperature vaporization of thorium–uranium mixed monocarbide $(Th_{1-y}, U_y)C$, T. Koyama and M. Yamawaki 167 (1989) 122
Use of thermochemical modelling for the analysis of energy extraction in a gas-core fission reactor, W. Boersma-Klein, J. Kistemaker and H.N. Stein 167 (1989) 135

The Gibbs energy of formation for URe_2 obtained from the interaction between UN and Re, E.K. Storms and D.G. Czechowicz 167 (1989) 169

Phase Transformations
Use of thermochemical modelling for the analysis of energy extraction in a gas-core fission reactor, W. Boersma-Klein, J. Kistemaker and H.N. Stein 167 (1989) 135
Heat capacities of uranium–zirconium alloys from 300 to 1100 K, Y. Takahashi, K. Yamamoto, T. Ohsato, H. Shimada, T. Terai and M. Yamawaki 167 (1989) 147
Heat capacity measurements of $U_{0.80}Zr_{0.20}$ and $U_{0.80}Mo_{0.20}$ alloys from room temperature to 1300 K, T. Matsui, T. Natsume and K. Naito 167 (1989) 152
Thermochemical properties of the alkali hydroxides: a review, R.J.M. Konings and E.H.P. Cordfunke 167 (1989) 251

Physical Properties
History of the application of the generalized Lewis acid–base theory to metals, L. Brewer 167 (1989) 3
Modeling of heat capacities of metals, O.H. Krikorian and D.Y. Lai 167 (1989) 14

Plutonium, Plutonium Alloys and Compounds
History of the application of the generalized Lewis acid–base theory to metals, L. Brewer 167 (1989) 3
Sublimation studies of plutonium trifluoride, P.D. Kleinschmidt 167 (1989) 131
The chemical constitution of the fuel–clad gap in oxide fuel pins for nuclear reactors, R.G.J. Ball, W.G. Burns, J. Henshaw, M.A. Mignanelli and P.E. Potter 167 (1989) 191
Recent thermochemical research on reactor materials and fission products, E.H.P. Cordfunke, R.J.M. Konings and E.F. Westrum, Jr. 167 (1989) 205

Refractory Metals and Alloys *(excl. Zr)*
High-temperature interdiffusion and phase equilibria in U–Mo, L.B. Lundberg 167 (1989) 64
The Gibbs energy of formation for URe_2 obtained from the interaction between UN and Re, E.K. Storms and D.G. Czechowicz 167 (1989) 169

Safety – Nuclear Reactors
The constant vaporizing composition of UO_2 at 2150 and 2800 K, J.-F. Babelot and M. Hoch 167 (1989) 25

Sodium
Carburization of stainless steel clad by uranium–plutonium carbide fuel, S. Rajendran Pillai, S. Anthonysamy, P.K. Prakashan, R. Ranganathan, P.R. Vasudeva Rao and C.K. Mathews 167 (1989) 105
Thermodynamic properties of ternary oxides of alkali metals from oxygen potential measurements, R. Sridharan, D. Krishnamurthy and C.K. Mathews 167 (1989) 265

Steels
Activities of metals in an AISI 316LN stainless steel by emf measurements, A.M. Azad, O.M. Sreedharan and J.B. Gnanamoorthy 167 (1989) 82
Thermochemistry of metal-rich chromium telluride and its role in fuel–clad chemical interactions, R. Viswanathan, M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews 167 (1989) 94
Carburization of stainless steel clad by uranium–plutonium carbide fuel, S. Rajendran Pillai, S. Anthonysamy, P.K. Prakashan, R. Ranganathan, P.R. Vasudeva Rao and C.K. Mathews 167 (1989) 105
Equilibrium chemistry of nitrogen and potential–pH diagrams for the Fe–Cr–H_2O system in BWR water, D. Cubicciotti 167 (1989) 241

Structural Materials
Activities of metals in an AISI 316LN stainless steel by emf measurements, A.M. Azad, O.M. Sreedharan and J.B. Gnanamoorthy 167 (1989) 82
Acitivity measurement and its use in predicting phase relationships in stainless steels, M.C.Y. Lee 167 (1989) 175

Thermodynamic Properties
History of the application of the generalized Lewis acid–base theory to metals, L. Brewer 167 (1989) 3
Thermodynamic data for uranium and thorium intermetallic compounds: a historical perspective, C.B. Alcock 167 (1989) 7
Modeling of heat capacities of metals, O.H. Krikorian and D.Y. Lai 167 (1989) 14
The constant vaporizing composition of UO_2 at 2150 and 2800 K, J.-F. Babelot and M. Hoch 167 (1989) 25
High-temperature heat capacities of UO_2 and doped UO_2, K. Naito 167 (1989) 30
Thermodynamic model of UO_{2+x}, A. Nakamura and T. Fujino 167 (1989) 36
Constitution and thermodynamics of the Mo–Ru, Mo–Pd, Ru–Pd and Mo–Ru–Pd systems, H. Kleykamp 167 (1989) 49

Thermodynamics of the uranium–zirconium system, L. Leibowitz, R.A. Blomquist and A.D. Pelton 167 (1989) 76
Activities of metals in an AISI 316LN stainless steel by emf measurements, A.M. Azad, O.M. Sreedharan and J.B. Gnanamoorthy 167 (1989) 82
Chromium activity in the Cr–Te system using a CaF_2 emf method, A.M. Azad and O.M. Sreedharan 167 (1989) 89
Thermochemistry of metal-rich chromium telluride and its role in fuel–clad chemical interactions, R. Viswanathan, M. Sai Baba, D. Darwin Albert Raj, R. Balasubramanian, B. Saha and C.K. Mathews 167 (1989) 94
Carburization of stainless steel clad by uranium–plutonium carbide fuel, S. Rajendran Pillai, S. Anthonysamy, P.K. Prakashan, R. Ranganathan, P.R. Vasudeva Rao and C.K. Mathews 167 (1989) 105
Thermodynamics of the vaporization of non-stoichiometric thorium monocarbide $ThC_{1\pm x}$, M. Yamawaki, T. Koyama and Y. Takahashi 167 (1989) 113
High-temperature vaporization of thorium–uranium mixed monocarbide $(Th_{1-y}, U_y)C$, T. Koyama and M. Yamawaki 167 (1989) 122
Thermodynamics of vaporisation of caesium molybdate, R.P. Tangri, V. Venugopal, D.K. Bose and M. Sundaresan 167 (1989) 127
Sublimation studies of plutonium trifluoride, P.D. Kleinschmidt 167 (1989) 131
Use of thermochemical modelling for the analysis of energy extraction in a gas-core fission reactor, W. Boersma-Klein, J. Kistemaker and H.N. Stein 167 (1989) 135
Evaluation and thermodynamic analysis of phase equilibria in the U–Al system, M.E. Kassner, P.H. Adler, M.G. Adamson and D.E. Peterson 167 (1989) 160
The Gibbs energy of formation for URe_2 obtained from the interaction between UN and Re, E.K. Storms and D.G. Czechowicz 167 (1989) 169
Acitivity measurement and its use in predicting phase relationships in stainless steels, M.C.Y. Lee 167 (1989) 175
Tellurium activities in the Pd–Te system by emf measurements, C. Mallika and O.M. Sreedharan 167 (1989) 181
The chemical constitution of the fuel–clad gap in oxide fuel pins for nuclear reactors, R.G.J. Ball, W.G. Burns, J. Henshaw, M.A. Mignanelli and P.E. Potter 167 (1989) 191
Recent thermochemical research on reactor materials and fission products, E.H.P. Cordfunke, R.J.M. Konings and E.F. Westrum, Jr. 167 (1989) 205
Thermodynamics of ceramic breeder materials for fusion reactors, O. Götzmann 167 (1989) 213
Study of adsorption and desorption of water on Li_4SiO_4, V. Schauer and G. Schumacher 167 (1989) 225
Effect of oxygen of hydrogen solubility in zirconium, S. Yamanaka, T. Tanaka and M. Miyake 167 (1989) 231
Thermochemical properties of the alkali hydroxides: a review, R.J.M. Konings and E.H.P. Cordfunke 167 (1989) 251
Determination of thermal properties of $Cs_2Cr_2O_7$(s, *l*) by high temperature Calvet calorimetry, R. Prasad, R. Agarwal, K.N. Roy, V.S. Iyer, V. Venugopal and D.D. Sood 167 (1989) 261
Thermodynamic properties of ternary oxides of alkali metals from oxygen potential measurements, R. Sridharan, D. Krishnamurthy and C.K. Mathews 167 (1989) 265
Thermodynamic properties of ternary oxides of fission products from calorimetric measurements, R. Saha, R. Babu, K. Nagarajan and C.K. Mathews 167 (1989) 271
Oxygen potentials in two-phase mixtures of the system MgU_2O_x $(5 < x \leqslant 7)$, B.S. Madan, C. Mallika, O.M. Sreedharan, P. Rodriguez and S.R. Paranjpe 167 (1989) 278

Thermophysical Properties

Thermodynamic data for uranium and thorium intermetallic compounds: a historical perspective, C.B. Alcock 167 (1989) 7
Modeling of heat capacities of metals, O.H. Krikorian and D.Y. Lai 167 (1989) 14
High-temperature heat capacities of UO_2 and doped UO_2, K. Naito 167 (1989) 30
Heat capacities of uranium–zirconium alloys from 300 to 1100 K, Y. Takahashi, K. Yamamoto, T. Ohsato, H. Shimada, T. Terai and M. Yamawaki 167 (1989) 147
Heat capacity measurements of $U_{0.80}Zr_{0.20}$ and $U_{0.80}Mo_{0.20}$ alloys from room temperature to 1300 K, T. Matsui, T. Natsume and K. Naito 167 (1989) 152
Recent thermochemical research on reactor materials and fission products, E.H.P. Cordfunke, R.J.M. Konings and E.F. Westrum, Jr. 167 (1989) 205
Thermochemical properties of the alkali hydroxides: a review, R.J.M. Konings and E.H.P. Cordfunke 167 (1989) 251

Thorium, Thorium Alloys and Compounds

Thermodynamics of the vaporization of non-stoichiometric thorium monocarbide $ThC_{1\pm x}$, M. Yamawaki, T. Koyama and Y. Takahashi 167 (1989) 113

High-temperature vaporization of thorium–uranium mixed monocarbide (Th_{1-y}, U_y)C, T. Koyama and M. Yamawaki 167 (1989) 122

Tritium

Thermodynamics of ceramic breeder materials for fusion reactors, O. Götzmann 167 (1989) 213

Study of adsorption and desorption of water on Li_4SiO_4, V. Schauer and G. Schumacher 167 (1989) 225

Uranium and Uranium Alloys

History of the application of the generalized Lewis acid–base theory to metals, L. Brewer 167 (1989) 3

Thermodynamic data for uranium and thorium intermetallic compounds: a historical perspective, C.B. Alcock 167 (1989) 7

High-temperature heat capacities of UO_2 and doped UO_2, K. Naito 167 (1989) 30

High-temperature interdiffusion and phase equilibria in U–Mo, L.B. Lundberg 167 (1989) 64

Thermodynamics of the uranium–zirconium system, L. Leibowitz, R.A. Blomquist and A.D. Pelton 167 (1989) 76

Use of thermochemical modelling for the analysis of energy extraction in a gas-core fission reactor, W. Boersma-Klein, J. Kistemaker and H.N. Stein 167 (1989) 135

Heat capacities of uranium–zirconium alloys from 300 to 1100 K, Y. Takahashi, K. Yamamoto, T. Ohsato, H. Shimada, T. Terai and M. Yamawaki 167 (1989) 147

Evaluation and thermodynamic analysis of phase equilibria in the U–Al system, M.E. Kassner, P.H. Adler, M.G. Adamson and D.E. Peterson 167 (1989) 160

The Gibbs energy of formation for URe_2 obtained from the interaction between UN and Re, E.K. Storms and D.G. Czechowicz 167 (1989) 169

Recent thermochemical research on reactor materials and fission products, E.H.P. Cordfunke, R.J.M. Konings and E.F. Westrum, Jr. 167 (1989) 205

Uranium Ceramics

The constant vaporizing composition of UO_2 at 2150 and 2800 K, J.-F. Babelot and M. Hoch 167 (1989) 25

Thermodynamic model of UO_{2+x}, A. Nakamura and T. Fujino 167 (1989) 36

Carburization of stainless steel clad by uranium–plutonium carbide fuel, S. Rajendran Pillai, S. Anthonysamy, P.K. Prakashan, R. Ranganathan, P.R. Vasudeva Rao and C.K. Mathews 167 (1989) 105

High-temperature vaporization of thorium–uranium mixed monocarbide (Th_{1-y}, U_y)C, T. Koyama and M. Yamawaki 167 (1989) 122

The chemical constitution of the fuel–clad gap in oxide fuel pins for nuclear reactors, R.G.J. Ball, W.G. Burns, J. Henshaw, M.A. Mignanelli and P.E. Potter 167 (1989) 191

Oxygen potentials in two-phase mixtures of the system MgU_2O_x $(5 < x \leqslant 7)$, B.S. Madan, C. Mallika, O.M. Sreedharan, P. Rodriguez and S.R. Paranjpe 167 (1989) 278

Zirconium, Zirconium Alloys and Compounds

Thermodynamics of the uranium–zirconium system, L. Leibowitz, R.A. Blomquist and A.D. Pelton 167 (1989) 76

Heat capacities of uranium–zirconium alloys from 300 to 1100 K, Y. Takahashi, K. Yamamoto, T. Ohsato, H. Shimada, T. Terai and M. Yamawaki 167 (1989) 147

Heat capacity measurements of $U_{0.80}Zr_{0.20}$ and $U_{0.80}Mo_{0.20}$ alloys from room temperature to 1300 K, T. Matsui, T. Natsume and K. Naito 167 (1989) 152

Effect of oxygen of hydrogen solubility in zirconium, S. Yamanaka, T. Tanaka and M. Miyake 167 (1989) 231